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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,236	12/31/2001	Ralph Anderson	KCC 4779 (K.C. No. 17,026	7312
321 7590 07/12/2004 SENNIGER POWERS LEAVITT AND ROEDEL ONE METROPOLITAN SQUARE 16TH FLOOR ST LOUIS, MO 63102			EXAMINER HALPERN, MARK	
			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/039,236	Applicant(s) ANDERSON ET AL.	
	Examiner Mark Halpern	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 24 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/17/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- 1) The Director has on March 1, 2004, granted the petition to withdraw the Notice of Abandonment of November 3, 2003.
- 2) Acknowledgement is made of Amendments received 4/15/2004 and 2/18/2004. Applicants amend claims 1, 13, and cancel claims 25-28.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 3) Claims 1-3, 8-9,12, are rejected under 35 U.S.C. 103(a) as being unpatentable over Vinson (6,162,329) in view of Soerens (4,994,146) and Smook.

Claims 1-3: Vinson discloses a process wherein papermaking furnish is deposited on a foraminous forming carrier, such as a Fourdrinier wire, to form a tissue paper web. The web is dewatered to a consistency of about 80 percent. Dewatering is performed with suction devices or with blow-through dryers (Vinson, col. 4, line 55 to col. 8, line 65). Softening agents that include plasticizers are added to the web (col. 8, lines 65-68), said plasticizers include polyethylene glycol of a molecular weight in range from 200 to 2000 (Vinson, col. 13, lines 19-42). The web is then dried with passing heated air, the dryer operating temperature being 177 °C (Vinson, col. 26, lines 1-3).

Vinson fails to disclose that the addition of polyethylene glycol is performed while the web is at consistency of about 80 % or less. Soerens discloses a process wherein an aqueous slurry of papermaking fibers is discharged from headbox 1 onto forming wire 2, forming web 3 as water passes through the forming wire. The web is transferred to fabric 4, which serves to further dewater the web. While traveling on fabric 4, (prior to reaching the heater) the web is sprayed 6 with an aqueous solution of polyethylene oxide. Polyethylene oxide is of the same polymer structure as is polyethylene glycol (Soerens, col. 2, line 42 to col. 4, line 28, and Figure 1). It is a well known in the art that the web consistency prior to the web drying, as in the process of Soerens, is less than 80 percent as disclosed by Smook on page 265. It would have been obvious to one skilled in the art at the time the invention was made to combine the teaching of Vinson and Soerens, because such a combination would improve the uniformity and quality of the creping step as disclosed by Soerens (col. 1, lines 50-68).

Claims 8-9: the percentage of polyethylene glycol in solution is from about 25 percent to about 75 percent (Vinson, col. 13, lines 37-42).

Claim 12: spray applicator 4 is disclosed applying softening composition to the formed tissue web (Vinson, col. 19, lines 1-15, and Figure 1).

Claim 26: the basis weight of the tissue product is in the range from about 10 to about 80 gr/m² (Vinson, col. 4, lines 36-44).

4) Claims 4-5, 13-16, 24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Vinson in view of Soerens and further in view of Kohler (WO 01/18310).

Claims 4-5: Vinson in view of Soerens is applied as above for claim 3, Vinson in view of Soerens fails to disclose the percentage of the polyethylene glycol in the partially dewatered web. Kohler discloses a process wherein polyethylene glycol of molecular weight less than 800 is added topically to a dewatered paper web as a surface finisher (Abstract, and pg. 6, lines 17-18). The polyethylene glycol is added in amounts from about 0.3 percent (Example 2, pg 21) to about 14 percent (Example 1, pg 19). It would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Vinson, Soerens and Kohler, because such a combination would expand the application of polyethylene glycol as a softener in the design of Vinson.

Claims 13, 16: Vinson discloses a process wherein papermaking furnish is deposited on a foraminous forming carrier, such as a Fourdrinier wire, to form a tissue paper web. The web is dewatered to a consistency of about 80 percent. Dewatering is performed with suction devices or with blow-through dryers (col. 4, line 55 to col. 8, line 65). Softening agents that include plasticizers are added to the partially dewatered web (col. 8, lines 65-68), said plasticizers include polyethylene glycol (col. 13, lines 19-42). Vinson fails to disclose the percentage of the polyethylene glycol in the partially dewatered web. Kohler discloses a process wherein polyethylene glycol is added topically to a dewatered paper web as a surface finisher (Abstract, and pg. 6, lines 17-18). The polyethylene glycol is added in amounts from about 0.3 percent (Kohler, Example 2, pg 21) to about 14 percent (Kohler, Example 1, pg 19). It would have been obvious, to one skilled in the art at the time the invention was made, to

combine the teachings of Vinson and Kohler, because such a combination would expand the application of polyethylene glycol as a softener in the design of Vinson.

Claims 14-15: the polyethylene glycol molecular weight is in range from 200 to 2000 (Vinson, col. 13, lines 19-42).

Claim 24: spray applicator 4 is disclosed applying softening composition to the formed tissue web (Vinson, col. 19, lines 1-15, and Figure 1).

5) Claims 6-7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Vinson in view of Soerens and further in view of Ploetz (3,779,791). Vinson in view of Soerens is applied as above for claim 3, Vinson in view of Soerens fails to disclose the temperature range of heated air from about 190 to about 210 °C. Ploetz discloses a process of topically applying polyethylene glycol to a formed paper sheet for the purpose of sterilization and heating said paper to a temperature of 200 °C (col. 2, lines 1-29). It would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Vinson, Soerens and Ploetz, because such a combination would by increasing the drying temperature reduce the overall drying time in the design of Vinson.

6) Claims 17-19, 20-21, are rejected under 35 U.S.C. 103(a) as being unpatentable over Vinson in view of Soerens and Kohler, and further in view of Ploetz.

Claims 17-19: Vinson in view of Soerens and Kohler is applied as above for claim 15, Vinson in view of Soerens and Kohler fails to disclose the temperature range of heated air from about 190 to about 210 °C. Ploetz discloses a process of topically applying polyethylene glycol to a formed paper sheet for the purpose of sterilization and

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heating said paper to a temperature of 200 °C (col. 2, lines 1-29). It would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Vinson, Soerens, Kohler and Ploetz, because such a combination would by increasing the drying temperature reduce the overall drying time in the design of Vinson.

Claims 20-21: the percentage of polyethylene glycol in solution is from about 25 percent to about 75 percent (Vinson, col. 13, lines 37-42).

Response to Amendment

- 7) Claims 1-3, 8-9, 12, rejection under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Vinson, is withdrawn in view of Applicants comments and further search of art in prior art.
- 8) Claims 4-5, 13-16, 24, rejection under 35 U.S.C. 103(a) as being unpatentable over Vinson in view of Kohler, is withdrawn in view of Applicants comments and further search of art in prior art.
- 9) Claims 6-7, rejection under 35 U.S.C. 103(a) as being unpatentable over Vinson in view of Ploetz, is withdrawn in view of Applicants comments and further search of art in prior art.
- 10) Claims 17-19, 20-21, rejection under 35 U.S.C. 103(a) as being unpatentable over Vinson in view of Kohler, and further in view of Ploetz, is withdrawn in view of Applicants comments and further search of art in prior art.

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11) Claims 25-28, rejection under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Vinson, is withdrawn in view of cancelled claims..

12) Applicant's arguments with respect to claims 1-9, 12-21, 24, have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Halpern whose telephone number is 571-272-1190. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone numbers for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1700.



Mark Halpern
Patent Examiner
Art Unit 1731